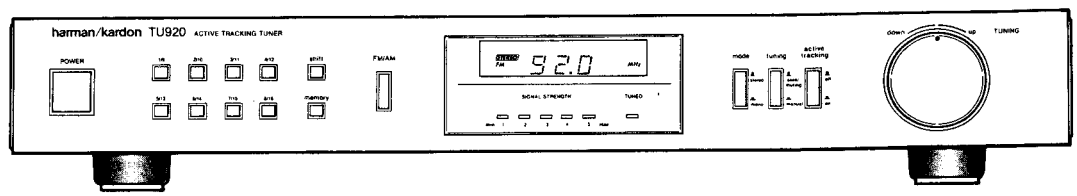
The Harman Kardon
Model TU920

Manual 117A

ACTIVE TRACKING TUNER

Technical Manual



The following marks found in the parts list of this manual identify the models as follows.

- (UA) : North America area model
- (BK) : North America area model Black version
- (G) : General model
- (GB) : General model Black version

harman/kardon
240 Crossways Park West, Woodbury, N.Y. 11797
1112-3152117A1 P-088709 1500 Printed in Japan

SPECIFICATIONS

• FM SECTION	Nominal	Limit
Tuning range	87.5 ~ 108.0MHz	
	50dB Quieting Sensitivity	
Mono	14.2dBf	≦ 19dBf
Mono for active tracking	14.7dBf	≦ 19dBf
Stereo	38.2dBf	≦ 41dBf
Usable Sensitivity	11.7dBf	≦ 15dBf
Image Ratio	49dB	≧ 40dB
IF Rejection	92dB	≧ 75dB
Spurious Response Rejection	94dB	
Capture Ratio	1.5dB	≦ 2dB
Alternate Channel Sensitivity	60dB	≧ 50dB
for active tracking	75dB	≧ 65dB
AM Rejection	59dB	≧ 49dB
Signal to Noise Ratio		
Mono	80dB	≧ 75dB
Stereo	73dB	≧ 68dB
Total Harmonic Distortion		
Mono	0.09%	≦ 0.3%
Mono for active tracking	0.28%	≦ 0.5%
Stereo	0.13%	≦ 0.4%
Stereo for active tracking	0.3%	≦ 0.8%
Stereo Separation at 1 kHz	52dB	≧ 40dB
for active tracking	32dB	≧ 28dB
Output Level/Impedance (Stereo)	750mV/2.2kΩ	

• AM SECTION	Nominal	Limit
Tuning range	520 ~ 1,710kHz	
Usable Sensitivity		
External Antenna	14μV	≦ 20μV
Loop Antenna	360μV/m	≦ 700μV/m
Selectivity	33dB	≧ 26dB
Signal to Noise Ratio	53dB	≧ 48dB
Image Rejection	40dB	≧ 30dB
IF Rejection	66dB	≧ 50dB

• DIMENSION (W × H × D)	17-7/16" × 2-11/16" × 14-3/16" (443 × 68 × 360 mm)
• WEIGHT	7.3 lbs.(3.3 kg)
• POWER SUPPLIES	
for North America area model	AC 120V, 60Hz
for General modle	AC 220/240V, 50/60Hz
• POWER CONSUMPTION	14W

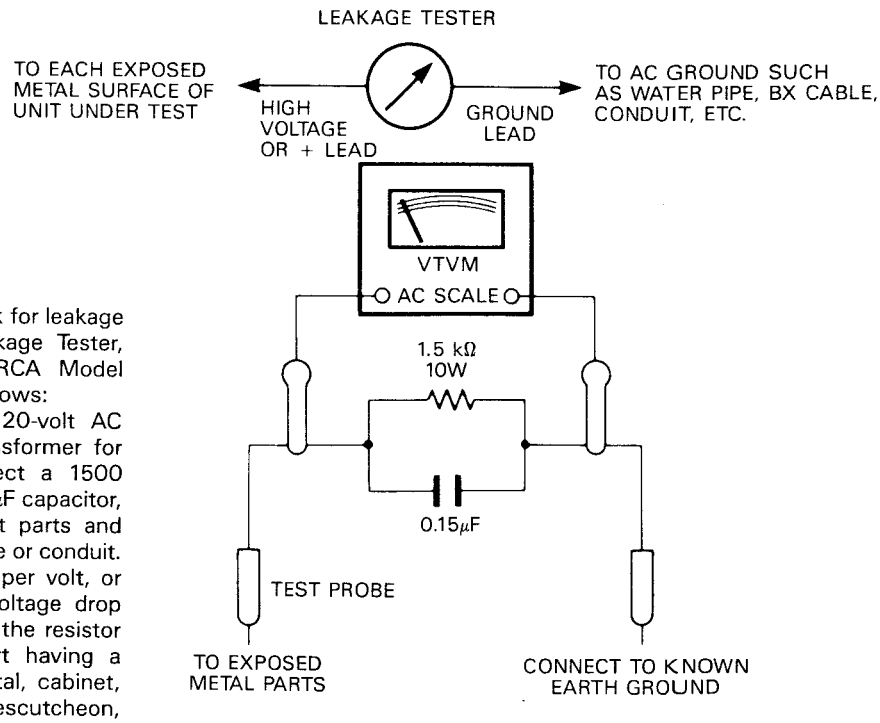
This specification is the target of servicing. But, there is a care that the specification is not applicable to the measurement condition and instrument.

Specifications and components subject to change without notice. Overall performance will be maintained or improved.

LEAKAGE TEST (FOR SERVICE ENGINEERS IN THE U.S.A.)

Before returning the unit to the user, perform the following safety checks:

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the unit.
2. Be sure that any protective devices such as nonmetallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc. which were removed for servicing are properly reinstalled.
3. Be sure that no shock hazard exists; check for leakage current using Simpson Model 229 Leakage Tester, standard equipment item No. 21641, RCA Model WT540A or use alternate method as follows:
   Plug the power cord directly into a 120-volt AC receptacle (do not use an Isolation Transformer for this test). Using two clip leads, connect a 1500 Ohm, 10-watt resistor paralleled by a 0.15 μF capacitor, in series with all exposed metal cabinet parts and a known earth ground, such as a water pipe or conduit. Use a VTVM or VOM with 1000 Ohms per volt, or higher sensitivity to measure the AC voltage drop across the resistor. (See Diagram.) Move the resistor connection to each exposed metal part having a return path to the chassis (antenna, metal, cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor. (This test should be performed with the power switch in both the On and Off positions.)
   A reading of 0.35 volt RMS or more is excessive and indicates a potential shock hazard which must be corrected before returning the unit to the owner.



DISASSEMBLY PROCEDURES (REFER TO PAGES 6 THROUGH 8 AND 11)

[1] CABINET TOP REMOVAL

Remove 6 screws (A) and then remove the Cabinet Top (131).

[2] FRONT PANEL ASS'Y (AA) REMOVAL

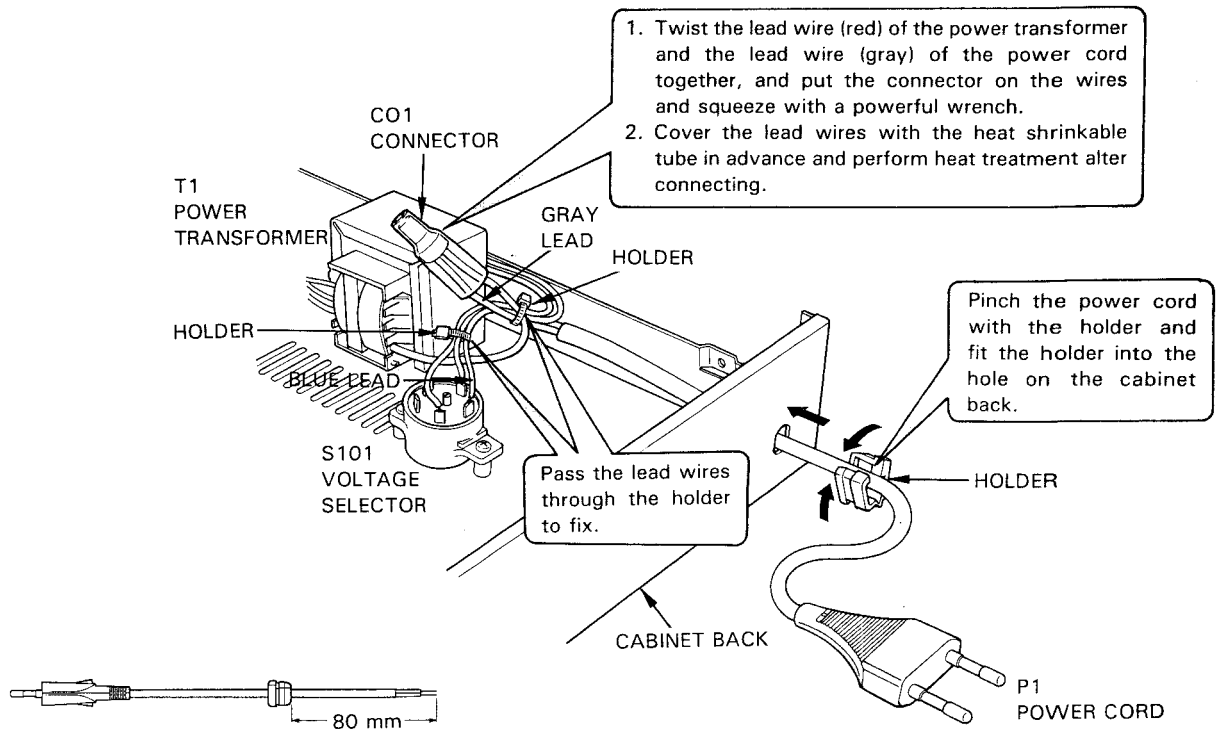
1. Remove the Cabinet Top (131), referring to the previous step [1].
2. Remove 7 screws (B) and then remove the Front Panel Ass'y (AA).

[3] MAIN P. C. BOARD (PCB-1) REMOVAL

1. Remove the Front Panel Ass'y (AA), referring to the previous step [2].
2. Unsolder the lead wires connected to the Main P. C. Board (PCB-1).
3. Remove 8 screws (C) and then remove the Main P. C. Board (PCB-1) with the Preset Switches and Tuning Switches P. C. Boards (PCB-2 and PCB-3) Chassis (173), etc.
4. Remove 2 screws (D) and then remove the Chassis (173) with PCB-2 and PCB-3.

POWER CORD REPLACEMENT (FOR SERVICE ENGINEERS OTHER THAN NORTH AMERICA)

In order to prevent fire or shock hazard when replacing the power cord, follow the procedure below to replace the part with the standard supply parts.


1. Twist the lead wire (red) of the power transformer and the lead wire (gray) of the power cord together, and put the connector on the wires and squeeze with a powerful wrench.
2. Cover the lead wires with the heat shrinkable tube in advance and perform heat treatment alter connecting.
CO1 CONNECTOR
T1 POWER TRANSFORMER
GRAY LEAD
HOLDER
HOLDER
BLUE LEAD
S101 VOLTAGE SELECTOR
Pass the lead wires through the holder to fix.
Pinch the power cord with the holder and fit the holder into the hole on the cabinet back.
HOLDER
CABINET BACK
P1 POWER CORD
80 mm

ALIGNMENT PROCEDURES (REFER TO PAGES 9, 10, 17 AND 18)

■ AM ADJUSTMENT

Conditions :
- Set the AM mode by pressing the "FM/AM" button.
- Press the "mode" switch to the "mono" (button in) position.
- Standard moduration of the AM signal Generator is 400Hz at 30%.

Step	Alignment	Connection Equipments	Measurement Frequency	Station Display	Adjustment	For
1	IF	• Connect the AM Test Loop Antenna cable into the output jack of AM Signal Generator. Place AM Test Loop Antenna close enough to couple signal into the AM Loop Antenna. • Connect the VTVM and oscilloscope to the OUTPUT jacks.	1400kHz	1400kHz	T251	Maximum output level and symmetrical curve on scope.
2	Tracking		1400kHz	1400kHz	TC251	Maximum output.
3			600kHz	600kHz	L251	Maximum output.
4			Repeat steps 2 and 3 for optimum sensitivity.			
5	Tuned indicator		1000kHz	1000kHz		Confirm the TUNED indicator lights at 5000μV/m input.

■ FM ADJUSTMENT

Conditions : ● Set the FM mode by pressing the "FM/AM" button.
● Press the "mode" switch to the "mono" (button in) position.

	U.S.A. model	General model
FM Signal Generator	1kHz, 100% modulation	1kHz, 45% modulation
Stereo Modulator	L+R=45.5%, L−R=45.5%, 19kHz=9%	L+R=22.5%, L−R=22.5%, 19kHz=8%

Step	Alignment	Connection Equipments	Measurement Frequency	Station Display	Adjustment	For
1	Discriminator	● Connect the FM Signal Generator to FM 300Ω BAL Antenna terminals through the 300Ω balanced dummy. [1mV(65dBf) input] ● Connect the Oscilloscope and Distortion meter to the OUTPUT jacks.	98.1MHz ±30~40kHz	98.1MHz	T201(A)	Adjust so that the TUNED indicator lights in the same range on both plus (+) and minus (−) sides of 98.1MHz.
2			98.1MHz	98.1MHz	T201(B)	Minimum distortion.
3			Repeat steps 1 and 2 for optimum sensitivity.			
4	Tuned indicator		98.1MHz	98.1MHz	VR351	Adjust so that the TUNED indicator lights at 22μV input. (32μV/75Ω input for General model)
5	Signal indicator		98.1MHz	98.1MHz	VR351	Adjust so that the five SIGNAL STRENGTH indicator lights at 450μV input. (500μV/75Ω input for General model)
6	Active tracking		98.1MHz	98.1MHz	L241 TC241	Adjust L203 so that the upper and lower parts of the waveform are symmetrical and TC241 so as to obtain the waveform immediately before clipping.
7	Tuned indicator		98.1MHz	98.1MHz	VR352	Adjust so that the TUNED indicator lights at 20μV input. (32μV/75Ω input for General model)
8	Signal indicator		98.1MHz	98.1MHz		Confirm the five SIGNAL STRENGTH indicator lights at 500μV input. (500μV/75Ω input for General model)
9	Separation	● Connect the Stereo Modulator to FM Signal Generator. Connect FM Signal Generator to FM 300Ω BAL Antenna terminal through the 300Ω balanced dummy. ● Connect the VTVM and Oscilloscope to the OUTPUT jacks. ● Press the "mode" switch to the "stereo" (button out) position.	98.1MHz	98.1MHz	VR301	Adjust so that the left channel output becomes minimum when only the right channel of the Stereo Modulator is modulated.
					VR301	Adjust so that the right channel output becomes minimum when only the left channel of the Stereo Modulator is modulated.
10	Normal AGC voltage	● Contact the FM Signal Generator to FM 300Ω BAL Antenna terminals through the 300Ω balanced dummy. (1000μV/75Ω input) ● Connect the VTVM to TP1(+) and ground(−).	98.1MHz	98.1MHz	VR101	Adjust so that voltage becomes 1.7V.
11	Active tracking AGC voltage		98.1MHz	98.1MHz	VR102	Adjust so that voltage becomes 1.7V.

CIRCUIT DESCRIPTION

■ FM TUNER SECTION

The FM signal which has entered through the antenna is high-frequncy amplified in the front end unit FE101, mixed with the output of the local oscillator and converted into the 10.7MHz intermediate-frequncy.
The 10.7MHz signal is amplified in the intermediate-frequncy amplifying section which consists of CF201, Q201 and CF202 and fed to 1 pin of IC201. In IC201, the signal is transmitted through the IF amplifier in two steps, and after being detected in the quadrature, it is transmitted through the post amplifier to 12 pin and then input to 2 pin of IC301. In IC301, the pilot signal is detected out of the signal which has been fed and 38kHz signal is produced. Then by this signal, stereo signal is demodulated, output from 4 pin for the left channel and from 7 pin for the right channel be fed to the amplifier.

■ ACTIVE TRACKING CIRCUIT

When FM reception is poor because the tuned frequency is interfered by some other strong FM signal nearby, turning ON the active tracking switch causes the signal from the tuned station to come out of IF AMP Q201 and pass through D202, CF203, IF AMP Q202 and CF204. Then it is fed to 1 pin of IC202 where its phase compared with the phase of the VCO output signal composed in Q204, D205 and L241, by the phase comparison device included in IC202. The output signal of the phase comparison device is sent out from 7 pin of IC202, transmitted through LPF consisting of Q203, R239 and C238 back to D205. As this forms the PLL circuit, the VCO output signal follows the signal within the PLL lock range only and that signal is sent through D204 to 1 pin of IC201.

■ AM TUNER SECTION

The AM signal which has entered through the antenna is transmitted through the tuning circuit consisting of L251 and TC251 to IC201. IN IC201 it undergoes high-frequncy amplification, intermediate-frequncy amplification local oscillation, intermediate-frequncy amplification and detection, and then output from 15 pin. This signal is turned ON and OFF at Q703 and Q704 according to the signal from the input selector and fed to 2 pin of IC301.

■ MUTING CIRCUIT

If FM is received out of tuning or in a very weak field intensity, 28 pin of IC702 becomes high level. This is fed to the base of Q351, whose collector then becomes low level and the collector of Q4 high level. As a result, Q301 (L ch) and (R ch) are conducted to mute the output.

■ SYNTHESIZER SECTION

- FM

The local oscillation output at the front end is fed to 5 pin of the prescaler IC701 and after being frequency devided into 30 or 32, it is fed to 37 pin of the PLL synthesizer IC702. In IC702, the standard frequency is oscillated by the crystal oscillator, compared with the devided local oscillation output signal and output to 34 pin. This voltage is level converted at Q701 and Q702, and fed to the varicap diode at the front end.

- AM

The local oscillation output is fed from 24 pin of IC201 to 39 pin of IC702. In IC702, the standard frequency is oscillated by the crystal oscillator, compaerd with the local oscillation output and output to 34 pin.

■ INDICATOR SECTION

- FREQUENCY DISPLAY

The serial data sent out of 27 pin of the PLL synthesizer IC702 is fed to 2 pin of the frequency indicating driver IC751, where the data is decoded to provide a signal which turns ON the indicator.

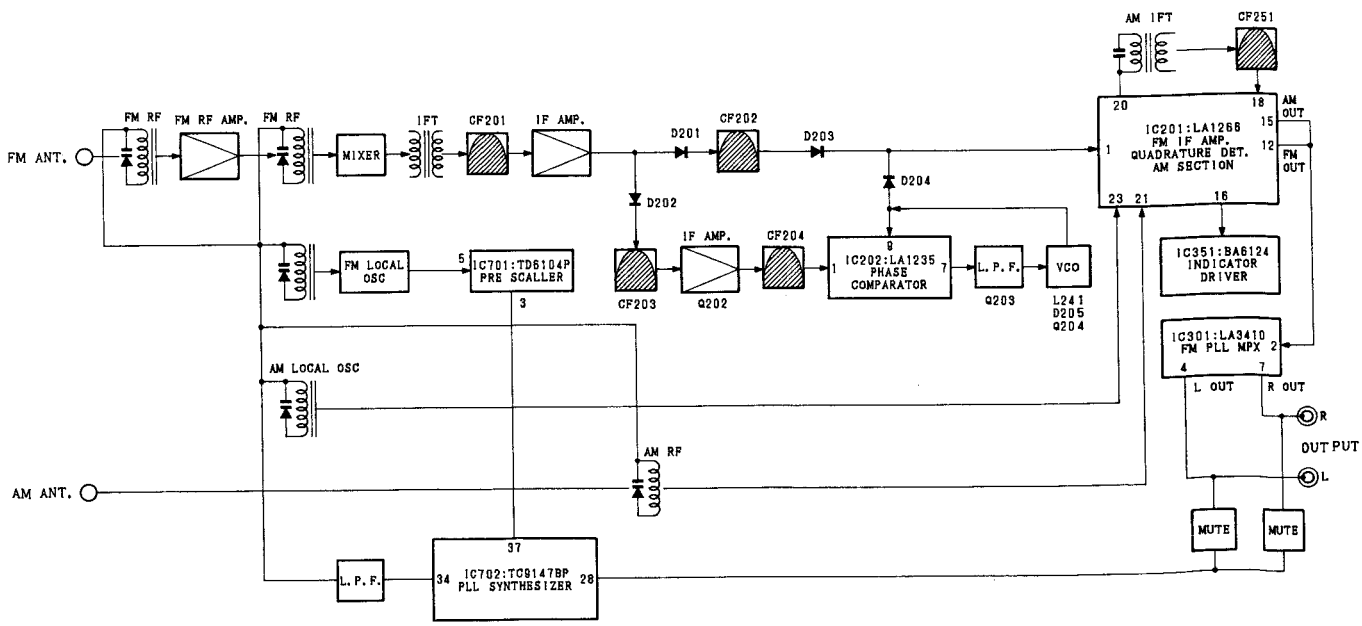
- SIGNAL STRENGTH

The voltage corresponding to the signal level is output from 16 pin of IC201 and input into 8 pin of the level comparator IC351. D361, D362, D363, D364 and D365 of the signal strength indicator turn ON according to the signal level.

- TUNING

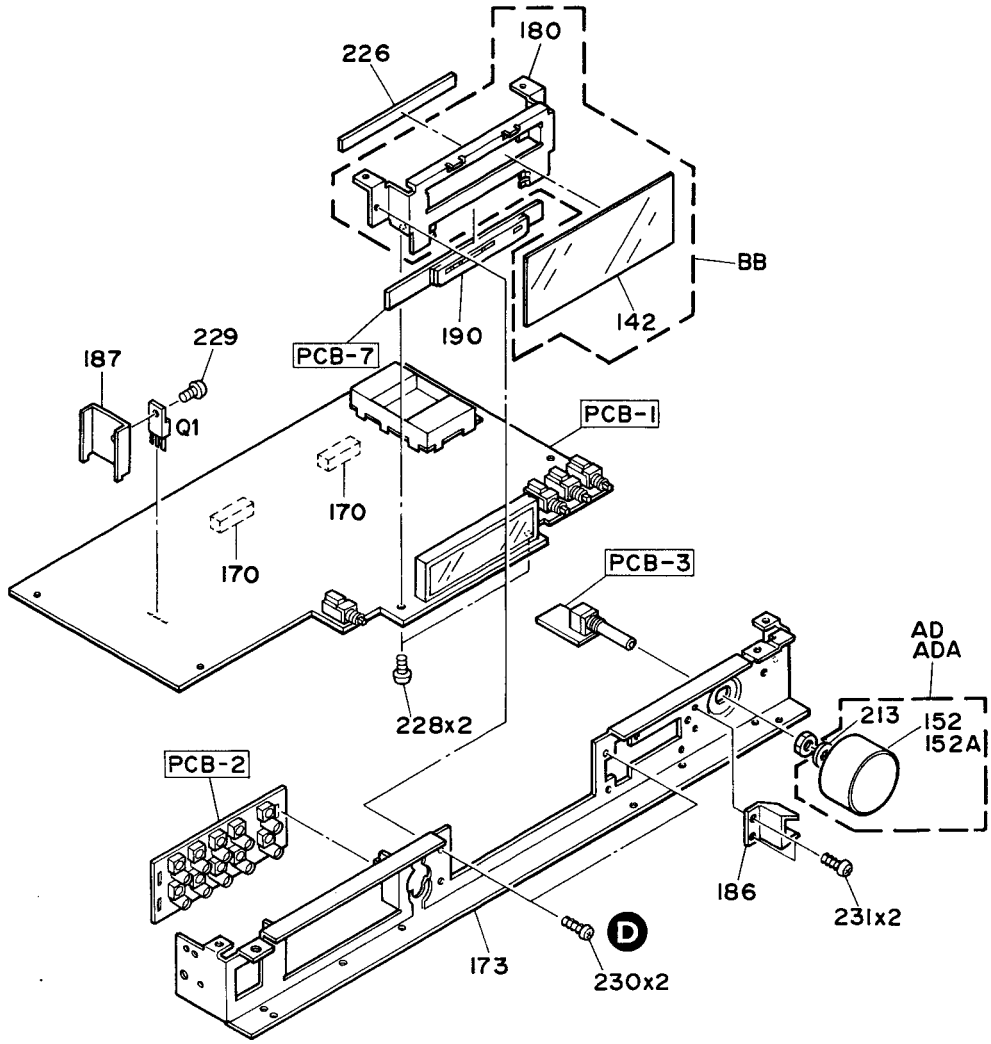
8 pin of IC201 becomes low level when tuned and the tuned indicator D366 connected there turns ON.

BLOCK DIAGRAM



GENERAL UNIT

EXPLODED VIEW (FRONT CHASSIS)

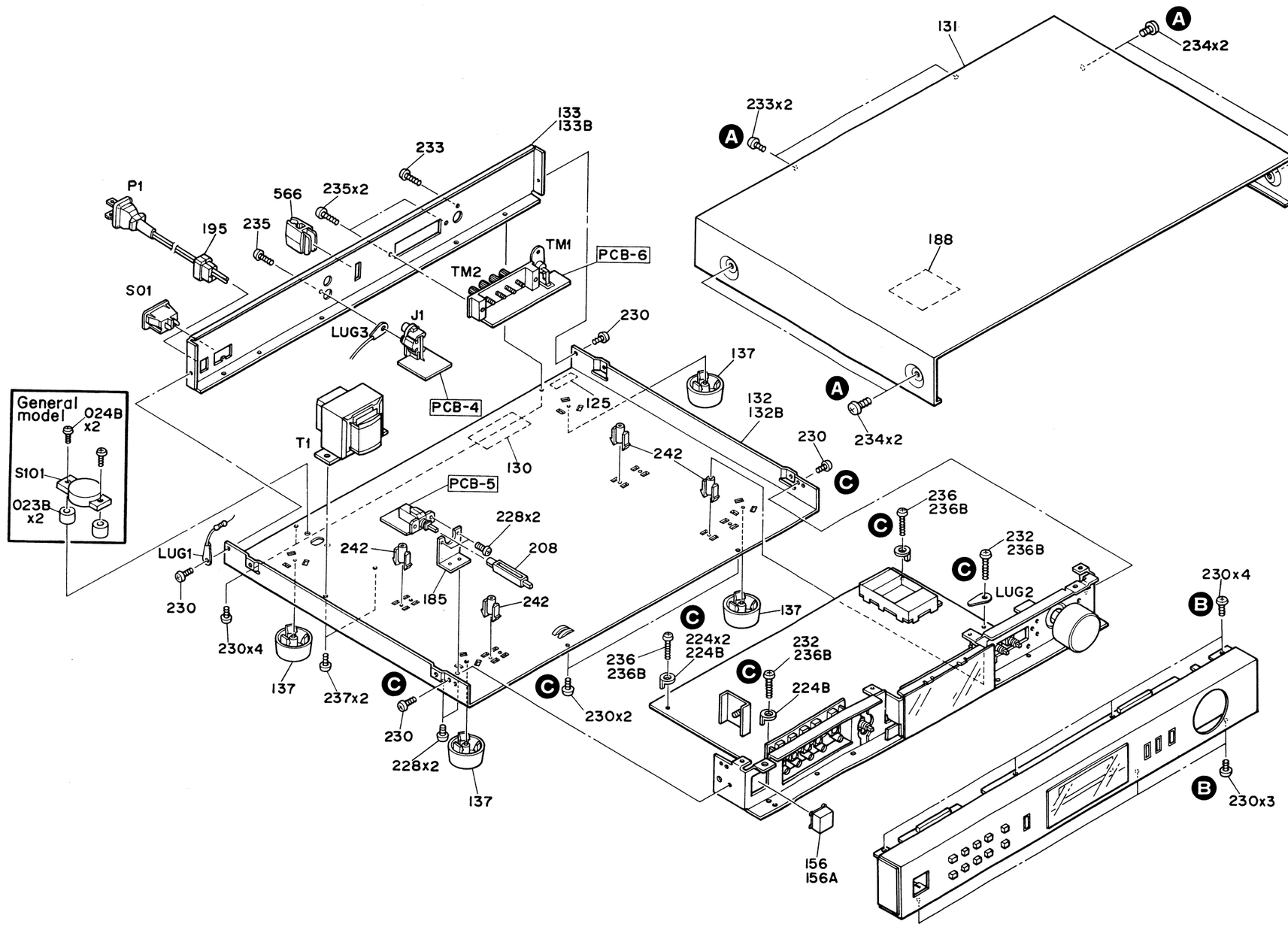


PARTS LIST

Ref. No.	Part No.	Description
AD	A630-TU920A	ROTARY KNOB ASS'Y UA G
ADA	A630-TU920B	ROTARY KNOB ASS'Y BK GB
BB	B219-TU920A	METAL FITTG ASS'Y
142	1531-09401	WINDOW
152	1630-03401	ROTARY KNOB UA G
152A	1630-03402	ROTARY KNOB BK GB
170	2112-11787	SPONGE
173	2211-7278	CHASSIS
180	2219-8001	METAL FITTG
186	2219-8128	METAL FITTG
187	2222-7197	HEAT SINK
190	2240-7317	HOLDER
213	2651-110518	SPRING
226	2111-11160	FELT
228	2327-R0130062	SCREW
229	2327-R0130082	SCREW
230	2347-R0130062	SCREW
231	2347-R0130062	SCREW
Q1	5614-1666(R)	TRANSISTOR

GENERAL UNIT

EXPLODED VIEW

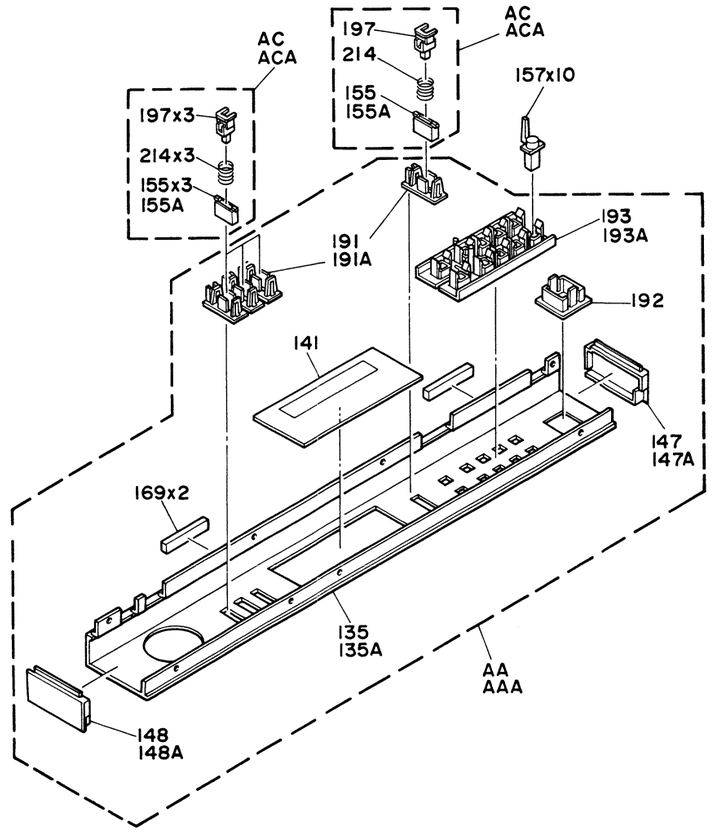


PARTS LIST

Ref. No.	Part No.	Description
023B	2132-7116	SPACER G GB
024B	2347-R0130122	SCREW G GB
025B	1751-14506	LABEL, FTZ G GB
125	1117-78	SERIAL LABEL
130	1756-CSA	LABEL UA BK
131	1414-02201	CABINET TOP
132	1424-23101	CABINET BOTTOM UA BK
132B	1424-23102	CABINET BOTTOM G GB
133	1424-18702	CABINET BACK UA BK
133B	1424-18802	CABINET BACK G GB
137	1319-0139	LEG
156	1660-00401	PUSH BUTTON UA BK
156A	1660-00403	PUSH BUTTON BK GB
185	2219-7984	METAL FITTG
188	2224-7091	INSULATOR
195	2240-364	HOLDER
208	2672-7018	LEVER
224	2219-7975	METAL FITTG
228	2327-R0130062	SCREW
230	2347-R0130062	SCREW
232	2347-R0130162	SCREW
233	2347-R0130064	SCREW
234	2347-R0140064	SCREW
235	2347-R0130104	SCREW
236	2347-R0130202	SCREW
237	2347-R0130082	SCREW
242	2360-7015	SPECIAL BOSS
566	2240-7208	HOLDER
LUG1	4211-4	LUG UA BK
LUG2	4211-4	LUG G GB
LUG3	4211-4	LUG G GB
⚠PI	4161-71147	CORD W/PLUG UA BK
⚠PI	4161-7256	CORD W/PLUG G GB
⚠TI	5584-701562	XFORMER, POWER UA BK
⚠TI	5584-702562	XFORMER, POWER G GB
⚠S101	4411-102729	ROTARY SWITCH G GB
⚠SOI	4474-164	SOCKET, AC OUTLET UA BK
JI	4482-0133	PIN JACK, 2P
TMI	4214-166	TERMINAL UA BK
TMI	4214-167	TERMINAL G GB
TM2	4214-164	TERMINAL

GENERAL UNIT

EXPLODED VIEW (FRONT PANEL ASS'Y)

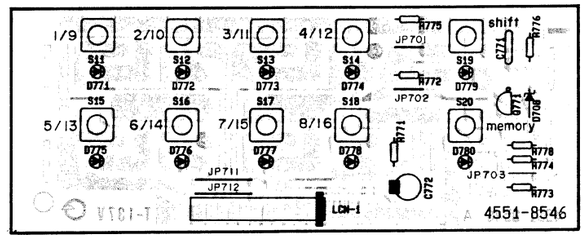


PARTS LIST

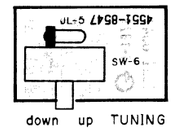
Ref. No.	Part No.	Description
AA	A443-TU920A	FRONT PANEL ASS'Y (U) (G)
AAA	A430-TU920B	FRONT PANEL ASS'Y (BK) (GB)
AC	A662-TU920A	PUSH BUTTON ASS'Y
135	1443-11001	PANEL (U) (G)
135A	1443-11002	PANEL (BK) (GB)
141	1531-07003	WINDOW
147	1562-02501	FRAME L (U) (G)
147A	1562-02502	FRAME L (BK) (GB)
148	1562-02601	FRAME R (U) (G)
148A	1562-02602	FRAME R (BK) (GB)
155	1662-34201VN	PUSH BUTTON (U) (G)
155A	1662-34202	PUSH BUTTON (BK) (GB)
157	1662-26701	PUSH BUTTON
169	2112-11762	SPONGE
191	2240-7144	HOLDER (U) (G)
191A	2240-7275	HOLDER (BK) (GB)
192	2240-7209	HOLDER
193	2240-7226	HOLDER (U) (G)
193A	2240-7260	HOLDER (BK) (GB)
197	2601-7075	SHAFT
214	2651-210190	SPRING

P. C. BOARDS

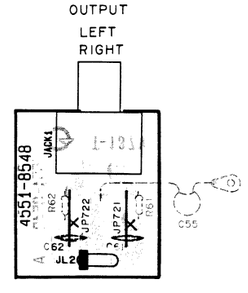
PCB-2 Preset Switches P. C. Board



PCB-3 Tuning Switch P. C. Board

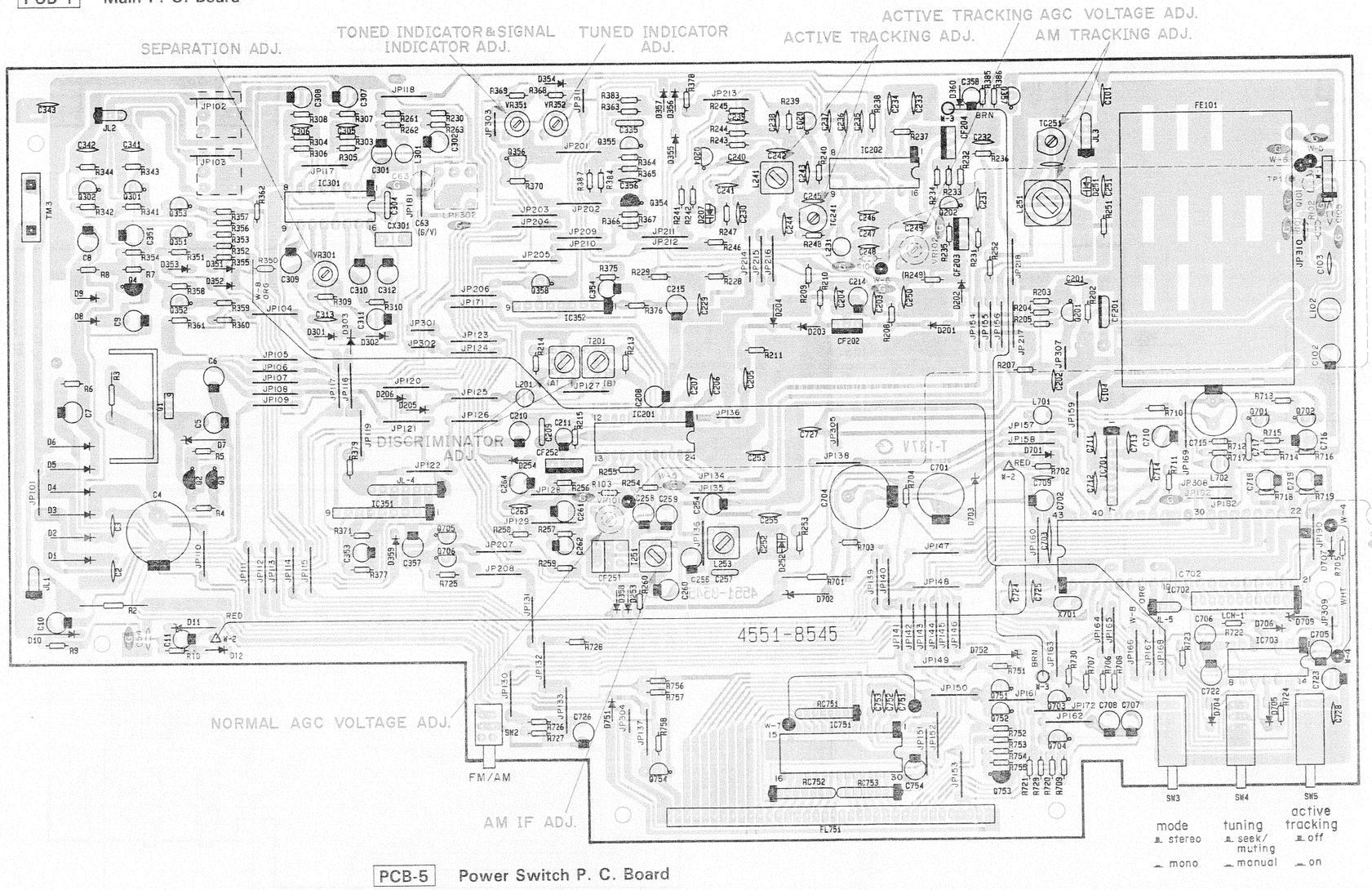


PCB-4 Output Jack P. C. Board

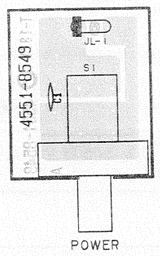


P. C. BOARDS

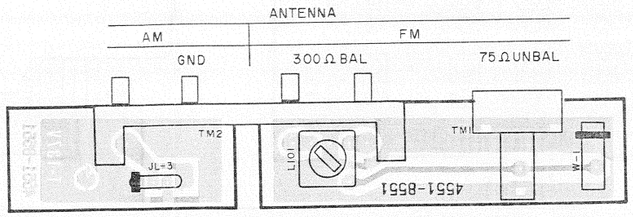
PCB-1 Main P. C. Board



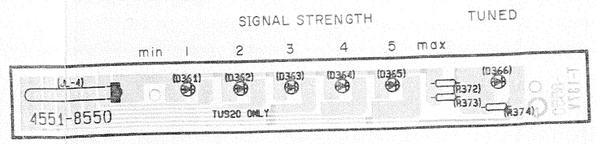
PCB-5 Power Switch P. C. Board



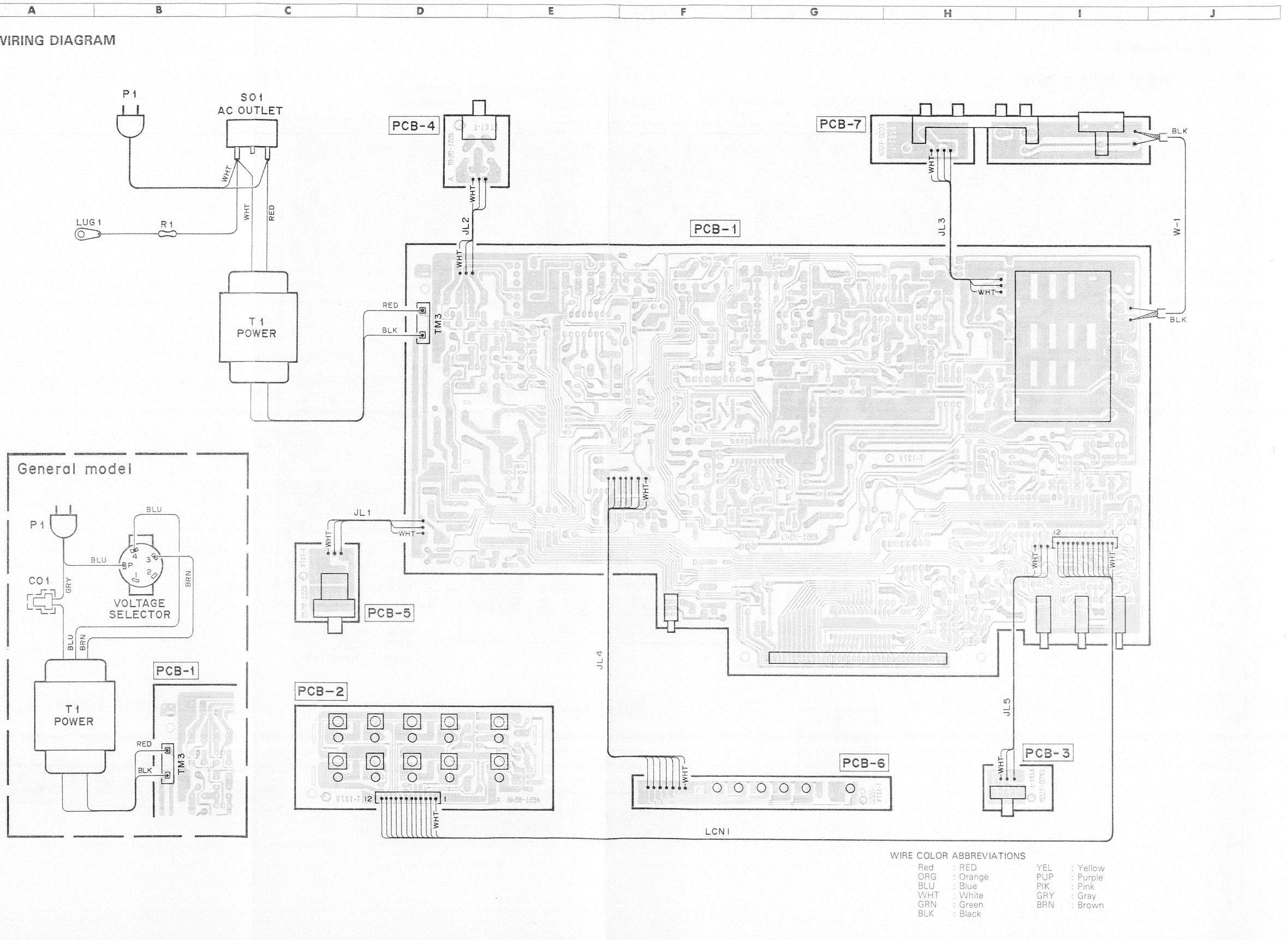
PCB-6 Antenna Terminal P. C. Board



PCB-7 Indicators P. C. Board



WIRING DIAGRAM



WIRE COLOR ABBREVIATIONS

Red	: RED	YEL	: Yellow
ORG	: Orange	PUP	: Purple
BLU	: Blue	PIK	: Pink
WHT	: White	GRY	: Gray
GRN	: Green	BRN	: Brown
BLK	: Black		

Ser. No.	Ref. No.	Part No.	Description
		PCB-1 MAIN P. C. BOARD	
		CAPACITORS	
786	C1	5361-473ZF	CAP, CER .047μ
786	C2	5361-473ZF	CAP, CER .047μ
786	C3	5361-473ZF	CAP, CER .047μ
779	C4	5345-228D041	CAP, MINI ELE 2200μ/25V
780	C5	5345-476C041	CAP, MINI ELE 47μ/16V
780	C6	5345-476C041	CAP, MINI ELE 47μ/16V
784	C7	5345-106D041	CAP, MINI ELE 10μ/25V
782	C8	5345-475D041	CAP, MINI ELE 4.7μ/25V
783	C9	5345-107D041	CAP, MINI ELE 100μ/25V
784	C10	5345-106D041	CAP, MINI ELE 10μ/25V
784	C11	5345-106D041	CAP, MINI ELE 10μ/25V
042B	C53	5361-223ZF	CAP, CER .022μ G GB
042B	C54	5361-223ZF	CAP, CER .022μ G GB
058B	C63	5345-226C041	CAP, MINI ELE 22μ/16V G GB
508	C101	5361-473ZF	CAP, CER .047μ
505	C102	5345-476C041	CAP, MINI ELE 47μ/16V
507	C103	5361-223ZF	CAP, CER .022μ
509	C104	5361-150KSL	CAP, CER 15p
053B	C105	5361-473ZF	CAP, CER .047μ G GB
542	C201	5361-223ZF	CAP, CER .022μ
542	C202	5361-223ZF	CAP, CER .022μ
542	C203	5361-223ZF	CAP, CER .022μ
542	C204	5361-223ZF	CAP, CER .022μ
543	C205	5361-103ZF	CAP, CER .01μ
542	C206	5361-223ZF	CAP, CER .022μ
542	C207	5361-223ZF	CAP, CER .022μ
539	C208	5345-106C041	CAP, MINI ELE 10μ/16V
544	C209	5361-101KB	CAP, CER 100p
544B	C209	5361-271KB	CAP, CER 270p G GB
539	C210	5345-106C041	CAP, MINI ELE 10μ/16V
540	C211	5345-105F041	CAP, MINI ELE 1μ/50V
558	C214	5345-225F041	CAP, MINI ELE 2.2μ/50V
557	C215	5345-476C041	CAP, MINI ELE 47μ/16V
601	C229	5361-223ZF	CAP, CER .022μ
606	C230	5361-103ZF	CAP, CER .01μ
601	C231	5361-223ZF	CAP, CER .022μ
601	C232	5361-223ZF	CAP, CER .022μ
601	C233	5361-223ZF	CAP, CER .022μ
601	C234	5361-223ZF	CAP, CER .022μ
602	C235	5361-101KB	CAP, CER 100p
602	C236	5361-101KB	CAP, CER 100p
603	C237	5361-473ZF	CAP, CER .047μ
604	C238	5361-472KB	CAP, CER 4700p
601	C239	5361-223ZF	CAP, CER .022μ
608	C240	5361-150JPH	CAP, CER 15p
606	C241	5361-103ZF	CAP, CER .01μ
607	C242	5361-180JRH	CAP, CER 18p
603	C243	5361-473ZF	CAP, CER .047μ
606	C244	5361-103ZF	CAP, CER .01μ
605	C245	5361-221KB	CAP, CER 220p
606	C246	5361-103ZF	CAP, CER .01μ
601	C247	5361-223ZF	CAP, CER .022μ
601	C248	5361-223ZF	CAP, CER .022μ
606	C249	5361-103ZF	CAP, CER .01μ
601	C250	5361-223ZF	CAP, CER .022μ
577	C251	5361-473ZF	CAP, CER .047μ
580	C252	5361-220JPH	CAP, CER 22p
577	C253	5361-473ZF	CAP, CER .047μ
572	C254	5345-106C041	CAP, MINI ELE 10μ/16V
578	C255	5361-103ZF	CAP, CER .01μ
575	C257	5359-4715851	CAP, PPP 470p
571	C258	5345-475D041	CAP, MINI ELE 4.7μ/25V
571	C259	5345-475D041	CAP, MINI ELE 4.7μ/25V
572	C260	5345-106C041	CAP, MINI ELE 10μ/16V
573	C261	5345-105F041	CAP, MINI ELE 1μ/50V
572	C262	5345-106C041	CAP, MINI ELE 10μ/16V
579	C263	5361-472KB	CAP, CER 4700p
574	C264	5345-224D041	CAP, MINI ELE .22μ/25V
630	C301	5345-476C041	CAP, MINI ELE 47μ/16V
629	C302	5345-226C0952	CAP, MINI ELE 22μ/16V
640	C304	5354-473K1HM	CAP, MYL .047μ
637	C305	5361-471KB	CAP, CER 470p
637B	C305	5361-271KB	CAP, CER 270p G GB
637	C306	5361-471KB	CAP, CER 470p
637B	C306	5361-271KB	CAP, CER 270p G GB
631	C307	5345-225F041	CAP, MINI ELE 2.2μ/50V
631	C308	5345-225F041	CAP, MINI ELE 2.2μ/50V
631	C309	5345-225F041	CAP, MINI ELE 2.2μ/50V
633	C310	5345-224F0952	CAP, MINI ELE .22μ/50V
634	C311	5345-106C041	CAP, MINI ELE 10μ/16V
632	C312	5345-474F0952	CAP, MINI ELE .47μ/50V
639	C313	5361-101KB	CAP, CER 100p
679	C335	5354-104593	CAP, MYL .1μ
636	C341	5361-472KB	CAP, CER 4700p
636	C342	5361-472KB	CAP, CER 4700p
677	C343	5361-223ZF	CAP, CER .022μ
658	C351	5345-474F041	CAP, MINI ELE .47μ/50V
660	C353	5345-106C041	CAP, MINI ELE 10μ/16V
659	C354	5345-105F041	CAP, MINI ELE 1μ/50V
678	C356	5361-473ZF	CAP, CER .047μ
660	C357	5345-106C041	CAP, MINI ELE 10μ/16V
661	C358	5345-226C041	CAP, MINI ELE 22μ/16V
694	C701	5345-107B041	CAP, MINI ELE 100μ/10V
695	C702	5345-476B041	CAP, MINI ELE 47μ/10V
709	C703	5361-223N913	CAP, CER .022μ
693	C704	5345-228A041	CAP, MINI ELE 2200μ/6.3V
697	C705	5345-225F041	CAP, MINI ELE 2.2μ/50V
697	C706	5345-225F041	CAP, MINI ELE 2.2μ/50V
700	C707	5345-105F041	CAP, MINI ELE 1μ/50V
700	C708	5345-105F041	CAP, MINI ELE 1μ/50V
704	C709	5361-103ZF	CAP, CER .01μ
695	C710	5345-476B041	CAP, MINI ELE 47μ/10V
702	C711	5361-223ZF	CAP, CER .022μ
710	C712	5361-222KB	CAP, CER 2200p
703	C713	5361-220KSL	CAP, CER 22p
704	C714	5361-103ZF	CAP, CER .01μ
696	C715	5345-227C041	CAP, MINI ELE 220μ/16V
698	C716	5345-334F0951	CAP, MINI ELE .33μ/50V
708	C717	5354-473K1HM	CAP, MYL .047μ
697	C718	5345-225F041	CAP, MINI ELE 2.2μ/50V
697	C719	5345-225F041	CAP, MINI ELE 2.2μ/50V
699	C722	5345-474F041	CAP, MINI ELE .47μ/50V
699	C723	5345-474F041	CAP, MINI ELE .47μ/50V
705	C724	5361-470JCH	CAP, CER 47p
705	C725	5361-470JCH	CAP, CER 47p
699	C726	5345-474F041	CAP, MINI ELE .47μ/50V
702	C727	5361-223ZF	CAP, CER .022μ
704	C728	5361-103ZF	CAP, CER .01μ
752	C751	5361-472KB	CAP, CER 4700p
752	C752	5361-472KB	CAP, CER 4700p
752	C753	5361-472KB	CAP, CER 4700p
750	C754	5345-106C041	CAP, MINI ELE 10μ/16V
		RESISTORS	
788	R2	5171-820593	RES, MTL 1 82
793	⚠R3	5102-2R251I6F	RES, FUSE 2.2
791	R4	5232-101J16P	RES, CBN 1/6P 100
790	R5	5232-223J16P	RES, CBN 1/6P 22K
789	R6	5232-682J16P	RES, CBN 1/6P 6.8K
795	R7	5232-223J16P	RES, CBN 1/6P 22K
796	R8	5232-473J16P	RES, CBN 1/6P 47K
787	R9	5232-152J16P	RES, CBN 1/6P 1.5K
794	R10	5232-102J16P	RES, CBN 1/6P 1K
059B	R63	5232-102J16P	RES, CBN 1/6P 1K G GB
050B	R101	5232-473J16P	RES, CBN 1/6P 47K G GB
051B	R102	5232-104J16P	RES, CBN 1/6P 100K G GB
051B	R103	5232-563J16P	RES, CBN 1/6P 56K G GB
054B	R104	5232-563J16P	RES, CBN 1/6P 56K G GB
545	R201	5232-391J16P	RES, CBN 1/6P 390
546	R202	5232-471J16P	RES, CBN 1/6P 470
547	R203	5232-154J16P	RES, CBN 1/6P 150K
545	R204	5232-391J16P	RES, CBN 1/6P 390
548	R205	5232-101J16P	RES, CBN 1/6P 100
551	R207	5232-102J16P	RES, CBN 1/6P 1K
609	R208	5232-222J16P	RES, CBN 1/6P 2.2K
610	R209	5232-331J16P	RES, CBN 1/6P 330

Ser. No.	Ref. No.	Part No.	Description	
609	R210	5232-222J16P	RES, CBN 1/6P 2.2K	
555	R211	5232-222J16P	RES, CBN 1/6P 2.2K	
552	R212	5232-680J16P	RES, CBN 1/6P 68	
553	R213	5232-103J16P	RES, CBN 1/6P 10K	
549	R214	5232-332J16P	RES, CBN 1/6P 3.3K	
554	R215	5232-223J16P	RES, CBN 1/6P 22K	
554B	R215	5232-333J16P	RES, CBN 1/6P 33K	G GB
609	R228	5232-222J16P	RES, CBN 1/6P 2.2K	
620	R229	5232-332J16P	RES, CBN 1/6P 3.3K	
646	R230	5232-472J16P	RES, CBN 1/6P 4.7K	
610	R231	5232-331J16P	RES, CBN 1/6P 330	
611	R232	5232-154J16P	RES, CBN 1/6P 150K	
612	R233	5232-391J16P	RES, CBN 1/6P 390	
613	R234	5232-101J16P	RES, CBN 1/6P 100	
552	R235	5232-680J16P	RES, CBN 1/6P 68	
614	R236	5232-102J16P	RES, CBN 1/6P 1K	
615	R237	5232-471J16P	RES, CBN 1/6P 470	
617	R238	5232-562J16P	RES, CBN 1/6P 5.6K	
614	R239	5232-102J16P	RES, CBN 1/6P 1K	
616	R240	5232-223J16P	RES, CBN 1/6P 22K	
619	R241	5232-472J16P	RES, CBN 1/6P 4.7K	
618	R242	5232-104J16P	RES, CBN 1/6P 100K	
610	R243	5232-331J16P	RES, CBN 1/6P 330	
614	R244	5232-102J16P	RES, CBN 1/6P 1K	
614	R245	5232-102J16P	RES, CBN 1/6P 1K	
616	R246	5232-223J16P	RES, CBN 1/6P 22K	
616	R247	5232-223J16P	RES, CBN 1/6P 22K	
614	R248	5232-102J16P	RES, CBN 1/6P 1K	
610	R249	5232-331J16P	RES, CBN 1/6P 330	
581	R251	5232-104J16P	RES, CBN 1/6P 100K	
583	R252	5232-471J16P	RES, CBN 1/6P 470	
581	R253	5232-104J16P	RES, CBN 1/6P 100K	
584	R254	5232-103J16P	RES, CBN 1/6P 10K	
584	R255	5232-103J16P	RES, CBN 1/6P 10K	
587	R256	5232-820J16P	RES, CBN 1/6P 82	
588	R257	5232-223J16P	RES, CBN 1/6P 22K	
584	R258	5232-103J16P	RES, CBN 1/6P 10K	
585	R259	5232-473J16P	RES, CBN 1/6P 47K	
586	R260	5232-152J16P	RES, CBN 1/6P 1.5K	
647	R261	5232-104J16P	RES, CBN 1/6P 100K	
647	R262	5232-104J16P	RES, CBN 1/6P 100K	
646	R263	5232-472J16P	RES, CBN 1/6P 4.7K	
643	R303	5232-154J16P	RES, CBN 1/6P 150K	
643B	R303	5232-184J16P	RES, CBN 1/6P 180K	G GB
643	R304	5232-154J16P	RES, CBN 1/6P 150K	
643B	R304	5232-184J16P	RES, CBN 1/6P 180K	G GB
642	R305	5232-124J16P	RES, CBN 1/6P 120K	
642B	R305	5232-154J16P	RES, CBN 1/6P 150K	G GB
642	R306	5232-124J16P	RES, CBN 1/6P 120K	
642B	R306	5232-154J16P	RES, CBN 1/6P 150K	G GB
644	R307	5232-332J16P	RES, CBN 1/6P 3.3K	
644	R308	5232-332J16P	RES, CBN 1/6P 3.3K	
645	R309	5232-103J16P	RES, CBN 1/6P 10K	
648	R310	5232-472J16P	RES, CBN 1/6P 4.7K	
645	R341	5232-103J16P	RES, CBN 1/6P 10K	
645	R342	5232-103J16P	RES, CBN 1/6P 10K	
645	R343	5232-103J16P	RES, CBN 1/6P 10K	
645	R344	5232-103J16P	RES, CBN 1/6P 10K	
669	R350	5232-222J16P	RES, CBN 1/6P 2.2K	
662	R351	5232-473J16P	RES, CBN 1/6P 47K	
662	R352	5232-473J16P	RES, CBN 1/6P 47K	
662	R353	5232-473J16P	RES, CBN 1/6P 47K	
663	R354	5232-103J16P	RES, CBN 1/6P 10K	
662	R355	5232-473J16P	RES, CBN 1/6P 47K	
664	R356	5232-223J16P	RES, CBN 1/6P 22K	
662	R357	5232-473J16P	RES, CBN 1/6P 47K	
672	R358	5232-473J16P	RES, CBN 1/6P 47K	
662	R359	5232-473J16P	RES, CBN 1/6P 47K	
662	R360	5232-473J16P	RES, CBN 1/6P 47K	
672	R361	5232-473J16P	RES, CBN 1/6P 47K	
673	R362	5232-100J16P	RES, CBN 1/6P 10	
674	R363	5232-222J16P	RES, CBN 1/6P 2.2K	
665	R364	5232-472J16P	RES, CBN 1/6P 4.7K	
664	R365	5232-223J16P	RES, CBN 1/6P 22K	
664	R366	5232-223J16P	RES, CBN 1/6P 22K	
664	R367	5232-223J16P	RES, CBN 1/6P 22K	
676	R368	5232-683J16P	RES, CBN 1/6P 68K	UA BK
676B	R368	5232-104J16P	RES, CBN 1/6P 100K	G GB
675	R369	5232-563J16P	RES, CBN 1/6P 56K	UA BK
675B	R369	5232-154J16P	RES, CBN 1/6P 150K	G GB
664	R370	5232-223J16P	RES, CBN 1/6P 22K	
663	R371	5232-103J16P	RES, CBN 1/6P 10K	
666	R375	5232-104J16P	RES, CBN 1/6P 100K	
666	R376	5232-104J16P	RES, CBN 1/6P 100K	
668	R377	5232-153J16P	RES, CBN 1/6P 15K	
680	R378	5232-471J16P	RES, CBN 1/6P 470	UA BK
680B	R378	5232-392J16P	RES, CBN 1/6P 3.9K	G GB
665	R379	5232-472J16P	RES, CBN 1/6P 4.7K	
674	R383	5232-222J16P	RES, CBN 1/6P 2.2K	
674	R384	5232-222J16P	RES, CBN 1/6P 2.2K	
667	R385	5232-183J16P	RES, CBN 1/6P 18K	
669	R386	5232-222J16P	RES, CBN 1/6P 2.2K	
674	R387	5232-222J16P	RES, CBN 1/6P 2.2K	
711	R701	5171-151593	RES, MTL 1 150	
713	R702	5232-471J16P	RES, CBN 1/6P 470	
714	R703	5232-103J16P	RES, CBN 1/6P 10K	
721	R704	5232-223J16P	RES, CBN 1/6P 22K	
720	R705	5232-104J16P	RES, CBN 1/6P 100K	
721	R706	5232-223J16P	RES, CBN 1/6P 22K	
721	R707	5232-223J16P	RES, CBN 1/6P 22K	
721	R708	5232-223J16P	RES, CBN 1/6P 22K	
721	R709	5232-223J16P	RES, CBN 1/6P 22K	
712	R710	5232-102J16P	RES, CBN 1/6P 1K	
714	R711	5232-103J16P	RES, CBN 1/6P 10K	
712	R712	5232-102J16P	RES, CBN 1/6P 1K	
716	R713	5232-473J16P	RES, CBN 1/6P 47K	
714	R714	5232-103J16P	RES, CBN 1/6P 10K	
715	R715	5232-822J16P	RES, CBN 1/6P 8.2K	
712	R716	5232-102J16P	RES, CBN 1/6P 1K	
712	R717	5232-102J16P	RES, CBN 1/6P 1K	
717	R718	5232-273J16P	RES, CBN 1/6P 27K	
718	R719	5232-333J16P	RES, CBN 1/6P 33K	
722	R720	5232-472J16P	RES, CBN 1/6P 4.7K	
723	R721	5232-222J16P	RES, CBN 1/6P 2.2K	
720	R722	5232-104J16P	RES, CBN 1/6P 100K	
720	R723	5232-104J16P	RES, CBN 1/6P 100K	
720	R724	5232-104J16P	RES, CBN 1/6P 100K	
731	R725	5232-153J16P	RES, CBN 1/6P 15K	
720	R726	5232-104J16P	RES, CBN 1/6P 100K	
720	R727	5232-104J16P	RES, CBN 1/6P 100K	
722	R728	5232-472J16P	RES, CBN 1/6P 4.7K	
732	R729	5232-473J16P	RES, CBN 1/6P 47K	
732	R730	5232-473J16P	RES, CBN 1/6P 47K	
755	R751	5232-223J16P	RES, CBN 1/6P 22K	
756	R752	5232-105J16P	RES, CBN 1/6P 1M	
754	R753	5232-473J16P	RES, CBN 1/6P 47K	
754	R754	5232-473J16P	RES, CBN 1/6P 47K	
754	R755	5232-473J16P	RES, CBN 1/6P 47K	
757	R756	5232-103J16P	RES, CBN 1/6P 10K	
758	R757	5232-472J16P	RES, CBN 1/6P 4.7K	
758	R758	5232-472J16P	RES, CBN 1/6P 4.7K	

INTEGRATED CIRCUITS

531	IC201	5653-LA1266	IC, LINEAR
591	IC202	5652-LA1235	IC, MONO
621	IC301	5653-LA3410	IC, LINEAR
651	IC351	5652-BA6124	IC, MONO
652	IC352	5652-BA695	IC, MONO
681	IC701	5654-TD6104P	IC, DIGITAL
682	IC702	5654-TC9147BP	IC, DIGITAL
683	IC703	5654-TC4001BP	IC, DIGITAL
741	IC751	5654-TD6301AN	IC, DIGITAL

TRANSISTORS

771	Q1	5614-1666(R)	XISTOR, NPN A
772	Q2	5611-1115(F)or(E)	XISTOR, PNP R
772	Q3	5611-1115(F)or(E)	XISTOR, PNP R
772	Q4	5611-1115(F)or(E)	XISTOR, PNP R
052B	Q101	5613-2603(F)or(E)	XISTOR, NPN R G GB

Ser. No.	Ref. No.	Part No.	Description
532	Q201	5613-2058(N)	XISTOR, NPN R
592	Q202	5613-2058(N)	XISTOR, NPN R
593	Q203	5613-2603(F)	XISTOR, NPN R
592	Q204	5613-2058(N)	XISTOR, NPN R
622	Q301	5613-2878(B)	XISTOR, NPN R
622	Q302	5613-2878(B)	XISTOR, NPN R
654	Q351	5613-2603(F)or(E)	XISTOR, NPN R
654	Q352	5613-2603(F)or(E)	XISTOR, NPN R
654	Q353	5613-2603(F)or(E)	XISTOR, NPN R
655	Q354	5611-1115(F)or(E)	XISTOR, PNP R
654	Q355	5613-2603(F)or(E)	XISTOR, NPN R
656	Q356	5613-RN1203	XISTOR, NPN R
654	Q357	5613-2603(F)or(E)	XISTOR, NPN R
656	Q358	5613-RN1203	XISTOR, NPN R
689	Q701	5613-2240(BL)	XISTOR, NPN R
685	Q702	5613-2603(F)	XISTOR, NPN R
685	Q703	5613-2603(F)	XISTOR, NPN R
685	Q704	5613-2603(F)	XISTOR, NPN R
684	Q705	5613-RN1203	XISTOR, NPN R
684	Q706	5613-RN1203	XISTOR, NPN R
747	Q751	5613-RN1203	XISTOR, NPN R
746	Q752	5613-2603(F)or(E)	XISTOR, NPN R
748	Q753	5611-1115(F)or(E)	XISTOR, PNP R
747	Q754	5613-RN1203	XISTOR, NPN R
		DIODES	
774	⚠D1	5632-S5277B-6	DIODE, RECT
774	⚠D2	5632-S5277B-6	DIODE, RECT
774	⚠D3	5632-S5277B-6	DIODE, RECT
774	⚠D4	5632-S5277B-6	DIODE, RECT
774	⚠D5	5632-S5277B-6	DIODE, RECT
774	⚠D6	5632-S5277B-6	DIODE, RECT
776	D7	5635-HZ15-1L	DIODE, ZENER
775	D8	5631-ISS133	DIODE, DET
775	D9	5631-ISS133	DIODE, DET
774	D10	5632-S5277B-6	DIODE, RECT
777	D11	5635-HZ6B1L	DIODE, ZENER
775	D12	5631-ISS133	DIODE, DET
598	D201	5631-ISS133	DIODE, DET
598	D202	5631-ISS133	DIODE, DET
598	D203	5631-ISS133	DIODE, DET
598	D204	5631-ISS133	DIODE, DET
556	D205	5631-ISS133	DIODE, DET
556	D206	5631-ISS133	DIODE, DET
599	D207	5633-ISV103	DIODE, CAP
561	D251	5633-ISV149	DIODE, CAP
561	D252	5633-ISV149	DIODE, CAP
562	D253	5631-ISS133	DIODE, DET
562	D254	5631-ISS133	DIODE, DET
623	D301	5631-ISS133	DIODE, DET
623	D302	5631-ISS133	DIODE, DET
657	D351	5631-ISS133	DIODE, DET
657	D352	5631-ISS133	DIODE, DET
657	D353	5631-ISS133	DIODE, DET
657	D354	5631-ISS133	DIODE, DET
657	D355	5631-ISS133	DIODE, DET
657	D356	5631-ISS133	DIODE, DET
657	D357	5631-ISS133	DIODE, DET
657	D358	5631-ISS133	DIODE, DET
657	D359	5631-ISS133	DIODE, DET
657	D360	5631-ISS133	DIODE, DET
688	D701	5631-ISS133	DIODE, DET
686	D702	5635-HZ9A1L	DIODE, ZENER
687	D703	5635-HZ6B1L	DIODE, ZENER
688	D704	5631-ISS133	DIODE, DET
688	D705	5631-ISS133	DIODE, DET
688	D706	5631-ISS133	DIODE, DET
688	D707	5631-ISS133	DIODE, DET
734	D709	5635-RD4R7EB2	DIODE, ZENER
742	D751	5631-ISS133	DIODE, DET
743	D752	5635-HZ11A2L	DIODE, ZENER

Ser. No.	Ref. No.	Part No.	Description
		COILS	
503	L102	5995-2R2J107	COIL W/CORE
537	L201	5995-2R2J107	COIL W/CORE
600	L231	5995-2R2J107	COIL W/CORE
596	L241	5922-00315	OSC COIL, 7
570	L251	5933-00101	COIL CASE, 10
564	L253	5922-00215	OSC COIL, 7
627	L301	5995-2R2J107	COIL W/CORE
691	L701	5995-2R2J107	COIL W/CORE
691	L702	5995-2R2J107	COIL W/CORE
		TRANSFORMERS	
536	T201	5572-10201	DISCRI 7
565	T251	5552-00712	IFT, AM 7
		CONTROLS	
055B	VR101	5101-10401937	RES, SEMI FIX 100K (G) (GB)
055B	VR102	5101-10401937	RES, SEMI FIX 100K (G) (GB)
626	VR301	5101-10401937	RES, SEMI FIX 100K
534	VR351	5101-50301937	RES, SEMI FIX 50K (UA) (BK)
534B	VR351	5101-10401937	RES, SEMI FIX 100K (G) (GB)
594	VR352	5101-50301937	RES, SEMI FIX 50K (UA) (BK)
594B	VR352	5101-10401937	RES, SEMI FIX 100K (G) (GB)
		MISCELLANEOUS	
814	S2	4431-S0602102	SWITCH, PUSH
815	S3	4431-S0601102	SWITCH, PUSH
815	S4	4431-S0601102	SWITCH, PUSH
815	S5	4431-S0601102	SWITCH, PUSH
690	X701	5691-00720022	XTAL, OSC
535	CF201	5671-7120A	FILTER, CER S
535B	CF201	5673-718A	FILTER ASST (G) (GB)
535	CF202	5671-7120A	FILTER, CER S
535B	CF202	5673-718A	FILTER ASST (G) (GB)
595	CF203	5671-7142A	FILTER, CER S
595	CF204	5671-7142A	FILTER, CER S
567	CF251	5671-0159	FILTER, CER S
568	CF252	5671-7137C	FILTER, CER S
625	CX301	5693-CSB456F1	OSC, CER
501	FE101	6114-00101	FM TUNER
501B	FE101	6114-00201	FM TUNER (G) (GB)
801	FL751	5722-14	TUBE DISPLAY
744	RC751	5212-473J0703	R COMPOSITE
744	RC752	5212-473J0703	R COMPOSITE
744	RC753	5212-473J0703	R COMPOSITE
597	TC241	5371-93	TRIMMER, IP
569	TC251	5371-93	TRIMMER, IP
823	TM3	4214-11033	TERMINAL
831	LCN1	4163-01101012	CONNECTR W/W
044B	LPF302	5214-86	LC COMPOSITE (G) (GB)

PCB-2 PRESET SWITCHES P. C. BOARD

		CAPACITORS	
726	C771	5361-102KB	CAP, CER 1000p
727	C772	5345-106C041	CAP, MINI ELE 10μ/16V
		RESISTORS	
728	R771	5232-221J16P	RES, CBN 1/6P 220
728	R772	5232-221J16P	RES, CBN 1/6P 220
728	R773	5232-221J16P	RES, CBN 1/6P 220
730	R774	5232-472J16P	RES, CBN 1/6P 4.7K
736	R775	5232-223J16P	RES, CBN 1/6P 22K
737	R776	5232-333J16P	RES, CBN 1/6P 33K
733	R778	5232-103J16P	RES, CBN 1/6P 10K
		TRANSISTORS	
724	Q771	5613-2240(BL)	XISTOR, NPN R
		DIODES	
725	D708	5635-RD4R7EB2	DIODE, ZENER
809	D771	5637-GL5NG40	LED

Ser. No.	Ref. No.	Part No.	Description
809	D772	5637-GL5NG40	LED
809	D773	5637-GL5NG40	LED
809	D774	5637-GL5NG40	LED
809	D775	5637-GL5NG40	LED
809	D776	5637-GL5NG40	LED
809	D777	5637-GL5NG40	LED
809	D778	5637-GL5NG40	LED
809	D779	5637-GL5NG40	LED
809	D780	5637-GL5NG40	LED
		MISCELLANEOUS	
813	SI1	4431-A017169	SWITCH, PUSH
813	SI2	4431-A017169	SWITCH, PUSH
813	SI3	4431-A017169	SWITCH, PUSH
813	SI4	4431-A017169	SWITCH, PUSH
813	SI5	4431-A017169	SWITCH, PUSH
813	SI6	4431-A017169	SWITCH, PUSH
813	SI7	4431-A017169	SWITCH, PUSH
813	SI8	4431-A017169	SWITCH, PUSH
813	SI9	4431-A017169	SWITCH, PUSH
813	S20	4431-A017169	SWITCH, PUSH

PCB-3 TUNING SWITCH P. C. BOARD

816	S6	4411-1027110	SWITCH, ROTRY
837	JL5	4242-R0103201	JUMPER LEAD

PCB-4 OUTPUT JACK P. C. BOARD

		CAPACITORS	
041B	C55	5361-223ZF	CAP, CER .022μ G GB
049B	C61	5361-101KB	CAP, CER 100p G GB
049B	C62	5361-101KB	CAP, CER 100p G GB
		RESISTORS	
048B	R61	5232-102J16P	RES, CBN 1/6P 1K G GB
048B	R62	5232-102J16P	RES, CBN 1/6P 1K G GB
		MISCELLANEOUS	
827	JI	4482-0133	PIN JACK, 2P
834	JL2	4242-R0103201	JUMPER LEAD

PCB-5 POWER SWITCH P. C. BOARD

812	⚠SI	4431-A02725	SWITCH, PUSH
833	JL1	4242-R0103201	JUMPER LEAD

PCB-6 ANTENNA TERMINAL P. C. BOARD

511	L101	5943-00136	COIL BBN, 10
835	JL3	4242-R0104201	JUMPER LEAD
820	TM1	4214-166	TERMINAL UA BK
820B	TM1	4214-167	TERMINAL G GB
821	TM2	4214-164	TERMINAL

Ser. No.	Ref. No.	Part No.	Description

PCB-7 INDICATORS P. C. BOARD

		RESISTORS	
670	R372	5232-122J16P	RES, CBN 1/6P 1.2K
670	R373	5232-122J16P	RES, CBN 1/6P 1.2K
671	R374	5232-681J16P	RES, CBN 1/6P 680
		DIODES	
810	D361	5637-TLG121	LED
810	D362	5637-TLG121	LED
810	D363	5637-TLG121	LED
810	D364	5637-TLG121	LED
810	D365	5637-TLG121	LED
810	D366	5637-TLG121	LED
		MISCELLANEOUS	
836	JL4	4242-R0107181	JUMPER LEAD

ABBREVIATIONS IN PARTS LIST

CAPACITORS

CAP, MINI ELE : Electrolytic
CAP, CER : Ceramic
CAP, PPP : Polypropylene
CAP, MYL : Mylar
CAP, MCA : Mica
CAP, MINI BP : Bipolar
CAP, ELE BP : Electrolytic Bipolar
CAP, STY : Polystyrene Film
CAP, SPE : Special
CAP, TAN : Tantalum
470μ : 470μF
6800p : 6800pF
.047μ : 0.047μF

RESISTORS

RES, CBN 1/6P : Carbon 1/6W
RES, FUSE : Fuse
RES, CEM 5P : Cement 5W
RES, MTL IP : Metal 1W
2.2K : 2.2kΩ
220 : 220Ω

TRANSISTORS

XISTOR : Transistor
FET : Field Effect Transistor

CONTROLS

RES, V CBN : Variable Carbon Resistor
RES, SEMI FIX : Semi-fixed Resistor

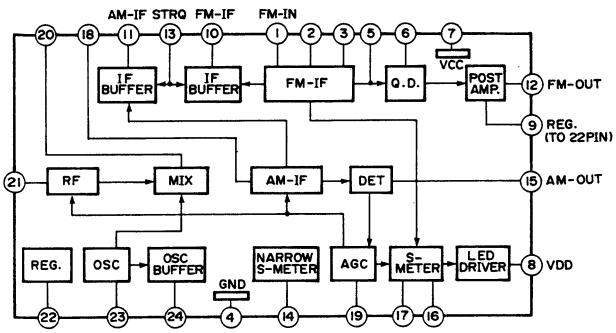
NOTE

⚠ SAFETY RELATED COMPONENT. USE ONLY EXACT REPLACEMENT PART AS SPECIFIED.

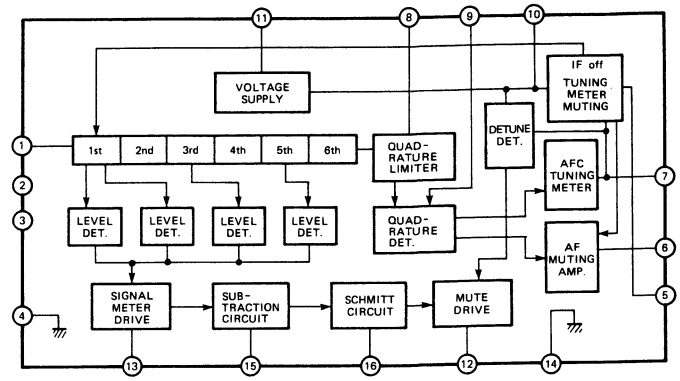
		CHASSIS MISCELLANEOUS	
804	⚠PI	4161-71147	CORD W/PLUG UA BK
804B	⚠PI	4161-7256	CORD W/PLUG G GB
807	⚠TI	5584-701562	XFORMER, POWER UA BK
807B	⚠TI	5584-702562	XFORMER, POWER G GB
792	⚠RI	5135-335J50P	RES, CBN 1/2P 3.3M UA BK
045B	⚠SI01	4411-102729	ROTARY SWITCH G GB
046B	⚠CO1	4443-712	CONNECTOR G GB
818	LUG1	4211-4	LUG UA BK
043B	LUG2	4211-4	LUG G GB
043B	LUG3	4211-4	LUG G GB
825	⚠SO1	4474-164	SOCKET, AC OUTLET UA BK
563		5911-235	AM LOOP ANT
803		4161-71184	CORD W/PLUG, CONNECT
805		1397-6	T FEEDER ANT
		PACKAGE PARTS LIST	
026B		1119-0135	ATTACH SHEET, FTZ G GB
111		1221-827147	CARTON BOX UA G
111A		1221-847147	CARTON BOX BK GB
113		1222-7227	CUSHION
114		1222-7224	CUSHION
116		1223-R0120055	SOFT SHEET
117		1241-R0123350	POLYETHYLENE BAG
118		1241-R0155500	POLYETHYLENE BAG
119		1241-R0115300	POLYETHYLENE BAG
120		1111-J30275	OWNER GUIDE
120B		1111-J30276	OWNER GUIDE G GB
121		1111-J90195	OWNER GUIDE
122		1113-717004	OWNER CARD UA BK
122B		1111-J30235	OWNER CARD, ADDENDUM SHEET G GB
123		1119-047	ATTACH SHEET UA BK

IC BLOCK DIAGRAM

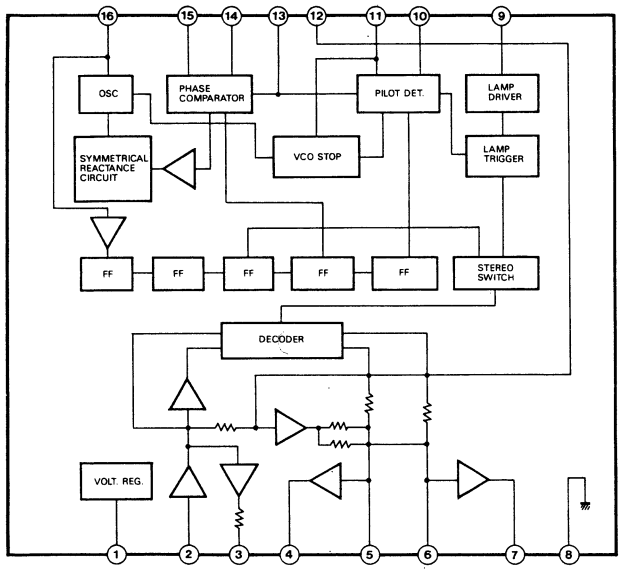
LA1266 : IC201 FM/AM IF



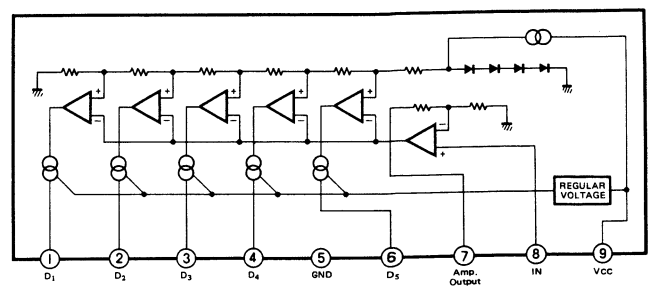
LA1235 : IC202 FM IF



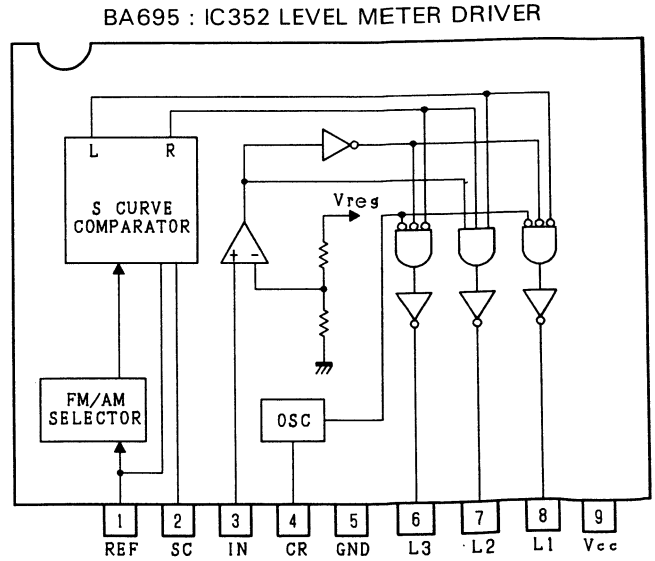
LA3410 : IC301 PLL MPX



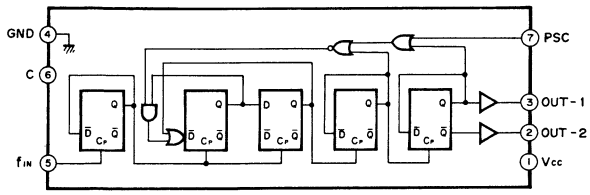
BA6124 : IC351 LEVEL METER DRIVER



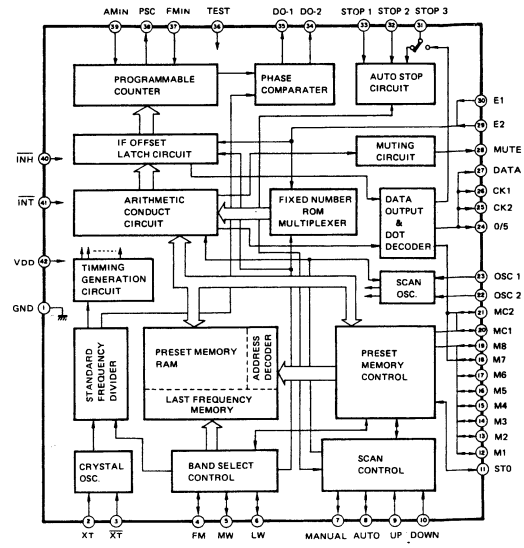
BA695 : IC352 LEVEL METER DRIVER



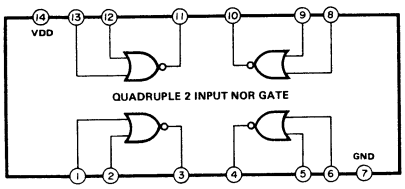
TD6104P : IC701 FM ECL PRE-SCALLER



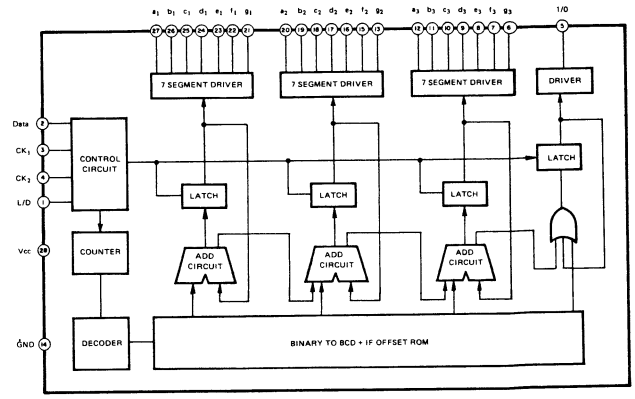
TC9147BP : IC702 DIGITAL TUNING SYSTEM LSI



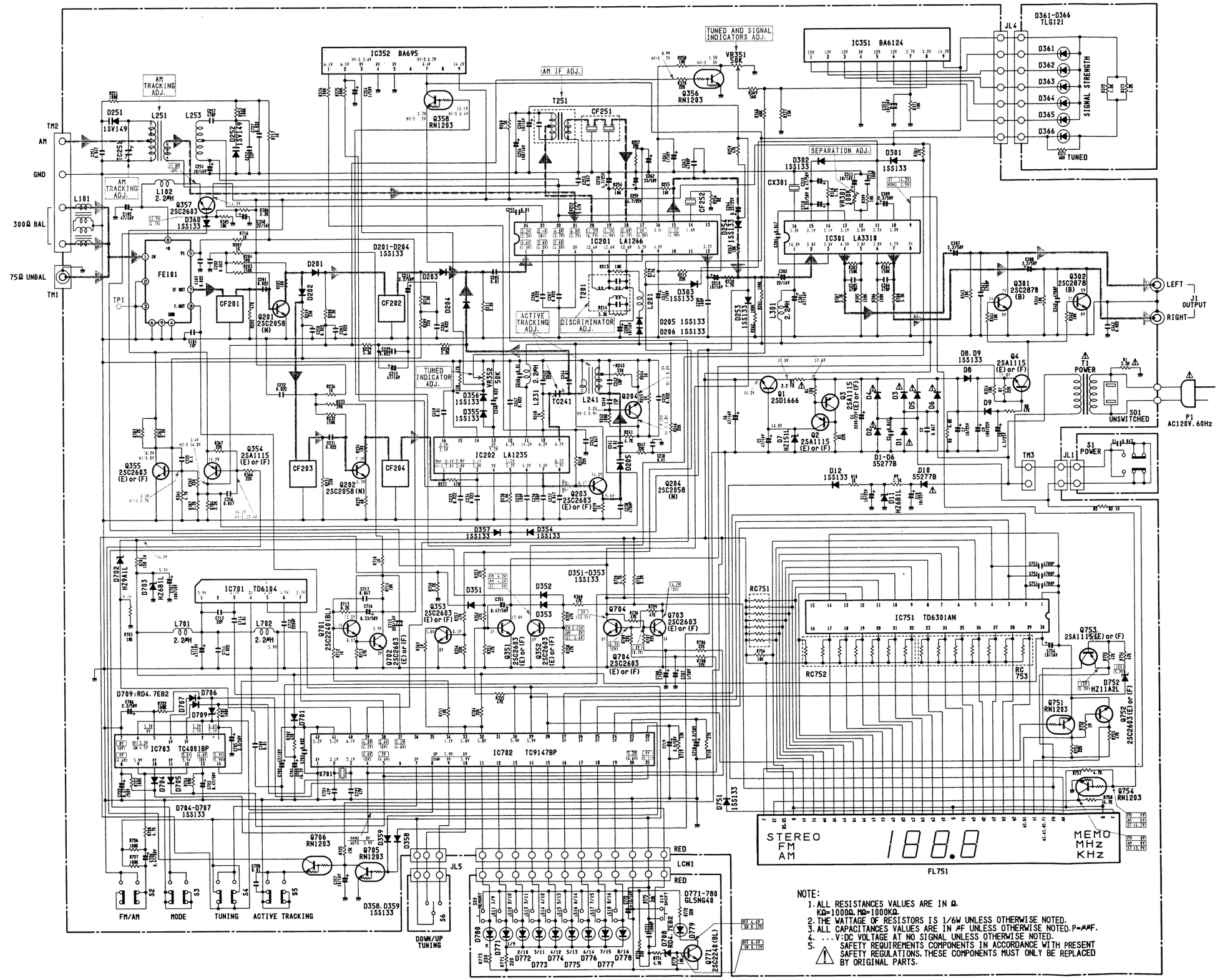
TC4001BP : IC703 QUAND 2 INPUT NOR GATE



TD6301AN : IC751 LCD DRIVER



SCHEMATIC DIAGRAM



NOTE:
1. ALL RESISTANCES VALUES ARE IN Ω.
   KΩ=1000Ω, MΩ=1000KΩ.
2. THE WATTAGE OF RESISTORS IS 1/6W UNLESS OTHERWISE NOTED.
3. ALL CAPACITANCES VALUES ARE IN μF UNLESS OTHERWISE NOTED. P=μμF.
4. ....V:DC VOLTAGE AT NO SIGNAL UNLESS OTHERWISE NOTED.
5. ⚠ SAFETY REQUIREMENTS COMPONENTS IN ACCORDANCE WITH PRESENT SAFETY REGULATIONS. THESE COMPONENTS MUST ONLY BE REPLACED BY ORIGINAL PARTS.

SCHEMATIC DIAGRAM (For General model)